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# Greek–Turkish Territorial Waters Game\*

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## 1 Introduction

Unlike the previous contributions to this section on Models of International Negotiations this chapter deals with a concrete and as yet unsolved international conflict, namely, that between Greece and Turkey over the breadth of territorial waters in the Aegean Sea. Greece claims that it has the freedom to extend its territorial waters to 12 miles, whereas Turkey has indicated that a Greek extension of territorial waters constitutes a *casus belli*. Currently, both countries apply the six-mile limit; several crises have occurred over this issue in the past, but the status quo has remained unchanged.

The conflict is modeled as a noncooperative game of asymmetric incomplete information in extensive form, where Greece may misperceive Turkish war costs. Therefore, following Harsanyi [6] we assume there are three rational players, namely Greece, Hard Turkey, and Soft Turkey, the latter two being characterized by Greek perceptions of Turkish war costs. Depending on the game parameters, computed Nash equilibria imply alternative explanations of the status quo, war, and the revised status quo in the Aegean Sea. While the status quo can depend upon Greek misperceptions, war and the revised status quo are found to be independent of them.

Practitioners or diplomats might be interested in explaining the continued observation of the six-mile limit, the periodic crises, and the likelihood of a war between Greece and Turkey. As there are no open negotiations between the littorals (Greece refuses to bring the issue to the negotiation table), intermittent declarations of positions constitute a tacit bargaining process. We can explain war and the endurance or the revision of the Aegean status quo under misperceptions using a simple model.

It is also possible to analyze the issue without requiring rationality assumptions. For example, Güner [4] proposes an evolutionary game by considering foreign policies as templates that reflect standard operating procedures and fixed strategic

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prescriptions. The game indicates a periodicity of hawkish and dovish foreign policies that generate recurrent crises over the Aegean Sea. When Greek hawks face a lesser number of Turkish hawks they fare better than Greek doves. Accordingly, Greek hawks are imitated, and the number of Greek hawks expands. Greek foreign policies mainly challenge the status quo. Matched with a greater number of Greek hawks, however, Turkish no-reaction policies become less successful, unlike those that demand a forceful response. Successful Turkish hawks are then imitated and Turkish foreign policy reacts to the challenges. Greek doves then again become more successful and they in turn multiply, as Greek hawks begin to encounter a greater number of Turkish hawks. Back to square one: the whole evolutionary process restarts. It is impossible, however, to investigate conscious strategic signals that players can give in an evolutionary game. As a result, the model I propose relies on the sophisticated rationality of unitary players.

In the sense of the definition of models *of* international negotiations, which is used throughout this publication, negotiations are not explicitly modeled here. In addition, the concrete model developed does not reflect an impartial view of the conflict, but rather that of a Turkish analyst. However, as outlined in this volume's general introduction it is demonstrated that the model could serve at least two policy purposes, which could become important for ongoing and forthcoming negotiations. First, policymakers could be encouraged to modify the present model according to their ideas of perceptions, moves, costs, etc., and second, models of the kind presented here could guide official policies in appropriate directions, thus contributing to the planning of promising negotiation strategies.

## 2 The Conflict

A major issue confronting Greece and Turkey is the breadth of territorial waters in the Aegean Sea. Greece claims that it has the freedom to extend its territorial waters to 12 miles, while Turkey has indicated that a Greek move to extend territorial waters constitutes a *casus belli*. Currently, both countries apply six-mile limits. Several crises have already occurred over the issue, yet the status quo has not been disturbed.

Greece and Turkey are the only littoral states in the Aegean. More than 3,000 islands, islets, and rocks cover the sea. All, apart from İmroz (Imyros), Bozcaada (Tenedos), and Tavşan (Rabbit) islands, belong to Greece with some rocks and islets forming contested sovereignty zones.<sup>2</sup> The 1923 Treaty of Lausanne fixed the extension of the littoral states' territorial waters at three miles. Greece unilaterally declared territorial waters of six miles in 1936 during a *détente* period between the two countries. Turkey responded in 1964 with a similar move, and the current status quo formed. Greece and Turkey each maintain six miles of territorial sea. In the Aegean, this delimitation produces Greek territorial waters of approximately 44 percent, Turkish territorial waters of 7.5 percent, and high seas of about 49 percent.

<sup>2</sup> Turkey and Greece reached the brink of war in 1996 over the status of İmra/Kardak islets situated 5.5 miles from the nearest Greek island Kalymnos, 2.2 miles from the Turkish Çavuş (Kato) island, and 3.8 miles from the Turkish mainland.

In accordance with the United Nations Convention on the Law of the Sea (UNCLOS), signed in 1982, which entered into force in 1994, signatory states have the right to establish territorial waters of up to 12 miles. The percentages of Greek, Turkish, and international waters would then become 71.5 percent, 8.8 percent, and 19.7 percent ([1], [11]). Greece, as a signatory state, considers the determination of the breadth of its territorial waters to be a sovereign right. It claims it will extend its territorial waters to 12 miles in the future. A revised status quo, if both littoral states extended their territorial waters to 12 miles, implies the resolution of the continental shelf issue in favor of Greece and the undersea connection of the Greek mainland with thousands of islands scattered around the Aegean. This constitutes a considerable continental gain of shelf [1]. While Greece defends the rule of territorial integrity, that the islands and the mainland form an unbreakable whole and cannot be separated from the mainland, Turkey insists that the continental shelf delimitation should be established by drawing an equidistant line between the Greek and Turkish continental land masses and that the Greek islands clustering along the Turkish coast cannot have their own continental shelves.

Following the ratification of UNCLOS by the Greek parliament in June 1994, the Turkish parliament approved a resolution authorizing the Government to use all necessary measures to protect the rights of Turkey should the need arise. The Turkish position stems from Article 300 of UNCLOS, according to which: “Parties shall fulfill in good faith the obligations assumed under this Convention and shall exercise the rights, jurisdiction and freedoms recognized in this Convention in a manner which would not constitute an *abuse of right*.”<sup>3</sup> The Aegean, according to Turkey, is a semi-enclosed sea and therefore requires the application of particular rules. Turkey insists that a Greek extension of its territorial waters to 12 miles will imply that even maritime transport between Turkish ports would require Greek permission. Turkey considers this to be an abuse of right. Greece argues exactly the opposite (i.e., the Aegean is not a semi-enclosed sea, and that the Turkish declaration of *casus belli* is against international norms). Greece believes that according to the UN Charter, Article 2, Paragraph 4, its territorial integrity is under threat.

Overall, the issue of the continental shelf in the Aegean is the only matter that Greece considers as controversial and negotiable. Greece insists on the one hand that it can extend its territorial seas to 12 miles at any time and sticks to the territorial integrity thesis, claiming that the Aegean is not a semi-enclosed sea and that the Turkish position of *casus belli* is contrary to the UN Charter. On the other hand, Turkey maintains that there is no rule applicable to all seas; specific rules should be applied like “the right of geographically disadvantaged states” in accordance with Article 70 of UNCLOS, and that no unilateral actions but coordination of actions should be permitted in semi-enclosed seas as recommended in Article 123 of UNCLOS.

Both countries seriously considered the option of war in 1976, 1987, and 1996. A crisis in 1976 saw both countries claiming rights to drill for oil in international waters. Greece and Turkey claimed that these areas belonged to their continental shelves. The genesis of this crisis was in 1972 when Greece granted oil exploration

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<sup>3</sup> Emphasis added.

licenses on the high seas. Greece claimed it was granting these licenses for oil exploration on its own continental shelf. Turkey reacted in 1973 by acting similarly and permitting its national oil company to drill on the high seas. It argued that these areas are on the extension of the Anatolian Peninsula and form the Turkish continental shelf. A crisis erupted in 1976 after Turkey sent an exploration ship to search for oil in the Aegean, and the UN Security Council issued Resolution 395 in August of the same year calling upon Greece and Turkey to do everything in their power to reduce the tension in the Aegean and asking them to resume direct negotiations. The Greek reaction and claims compelled Turkey to declare any move by Greece to extend its territorial waters as a *casus belli*. The tension subsequently eased, and both sides later agreed in Bern to inform each other of their exploration activities and to respect the status quo. A crisis in 1987 occurred almost in the same fashion, with Greece starting to drill for oil and Turkey reacting by sending a ship into the contested waters. The tension eased within days. The prime ministers of both countries met in Davos, Switzerland, and reached an understanding. Neither the Davos process nor the Bern Agreement settled the issue of the continental shelf. Both crises indicated a serious likelihood of war but ended in agreements (explicit or tacit) that did not last long. There was a further crisis in 1996 over Imia/Kardak Rocks with both countries claiming sovereignty. The crisis de-escalated with active United States mediation and the status quo ante was finally restored. We agree with Bahçeli [3]:

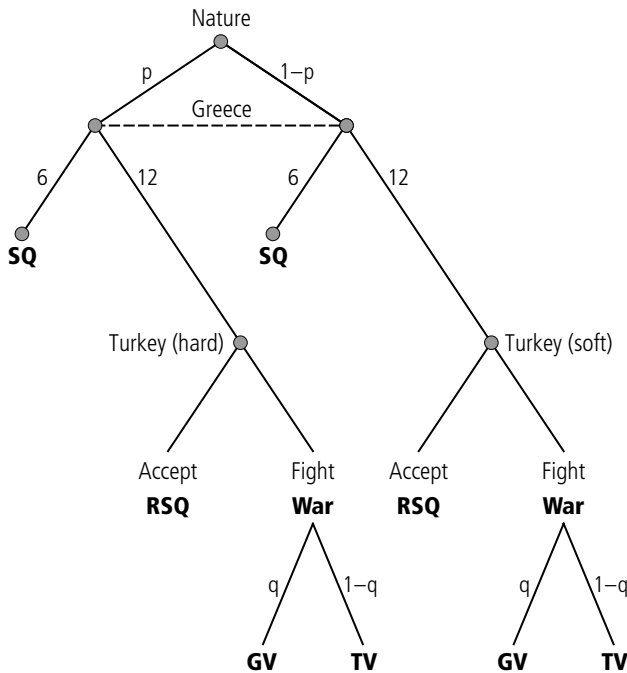
While most Aegean quarreling has centered on the continental shelf, the territorial sea issue is the one that is most vital for Turkey. The two issues are not unrelated, since all of the shelf claimed by Greece would accrue to it automatically, were it able to implement a 12-mile territorial claim.

Either claiming 12-mile territorial waters or the continental shelf finally amounts to the same sovereignty demand.

### 3 The Model

We begin by assuming that Greece is unsure about the costs of war for Turkey. Turkey is assumed to have two distinct types of war costs: war is costly for one type of Turkey but not that costly for the other type. Furthermore, it is assumed that Turkey knows Greek uncertainty, Greece knows that Turkey knows its uncertainty, Greece knows that Turkey knows that Greece knows its uncertainty and so on, *ad infinitum*. We further assume that war is costly for both sides, but Greek gain is almost doubled in a new status quo.

Greece can decide between six and 12 miles of territorial waters without exactly knowing what type of Turkey it faces. Once Greece makes its choice of 12 miles, Turkey could respond by either declaring war or accepting a new status quo in the Aegean Sea. The game ends if Greece chooses to remain at six miles of territorial waters or Turkey responds either by fighting back to Greek extension of its territorial waters or not fighting back. These assumptions imply the model represented graphically in *Figure 1*.



**Fig. 1.** Greek–Turkish territorial-waters conflict game (general)

In *Figure 1* the status quo and the revised status quo are abbreviated as SQ and RSQ, Greek victory and Turkish victory as GV and TV respectively. The tree greatly simplifies the dispute: there are only two players, and each player has two actions. Nature is the chance move that determines the type of Turkey. Turkey can either be hard or soft type with  $p$  and  $1 - p$  probabilities, respectively. The Soft is presumed to suffer more than the Hard at the outbreak of war. Nature's move determines Greek misperception. Greece does not know which type is going to react when it decides to extend its territorial waters to 12 miles. The broken line tying nodes where Greece takes a decision indicates Greek suspicion.

After Nature determines its misperception, Greece moves by choosing either six or 12 miles. If it chooses to remain at a six-mile limit, the current status quo is not disturbed. The outcome becomes the status quo (indicated as SQ in the tree). If it chooses 12 miles, then Turkey reacts by either accepting 12 miles or fighting. If Turkey accepts the 12-mile delimitation, then the outcome is the revised status quo (RSQ). If Turkey fights after a Greek extension, the outcome is war. Either Greece (GV) or Turkey prevails (TV) respectively with probabilities  $q$  and  $1 - q$  in the case of war.

Players obtain no territorial gain and suffer no war costs in the current status quo with respect to other outcomes in the game. Thus, for convenience, status quo payoffs for Greece and Turkey may be normalized to  $(0, 0)$  where the first component

on the left is the Greek and that on the right is Turkish. If Greece extends and Turkey accepts, the status quo is revised. Greece almost doubles its Aegean territory, which is territory lost to Turkey. It can thus be assumed that Greece obtains 2 and Turkey  $-2$  in the revised status quo. If Greece chooses to extend its territorial waters to 12 miles and Turkey responds by fighting, war occurs. If Greece wins the war, a new status quo occurs. Greece obtains its utility of the new status quo but suffers war costs that are denoted by the parameter  $g$ . Greece receives  $2 - g$  as a result of victory. If Greece loses, the old status quo continues under war costs. As Greece obtains 0 in the status quo but only suffers costs of war, a Greek defeat payoff is  $-g$ .

Both types of Turkey obtain 0 in the current status quo. If they accept a 12-mile norm in the Aegean Sea after Greece extends its territorial waters, both types of Turkey lose what Greece gains. Thus, the Hard and the Soft both obtain  $-2$  in the revised status quo without war. If they respond to Greek extension by a military reaction, the status quo is revised through war, given that Greece becomes victorious. In this case, the Hard's payoff is assumed to be  $-2 - t/2$  and the Soft's payoff is  $-2 - t$ , where the parameter  $t$  denotes Turkish war costs. The distinction between the Hard and the Soft is that the Hard suffers half of what the Soft does in case of war. If they respond by attack and they become victorious, the status quo is not revised. The Hard's payoff is measured by its costs of war that is  $-t/2$ , and the Soft's payoff is measured by  $-t$  in this instance.

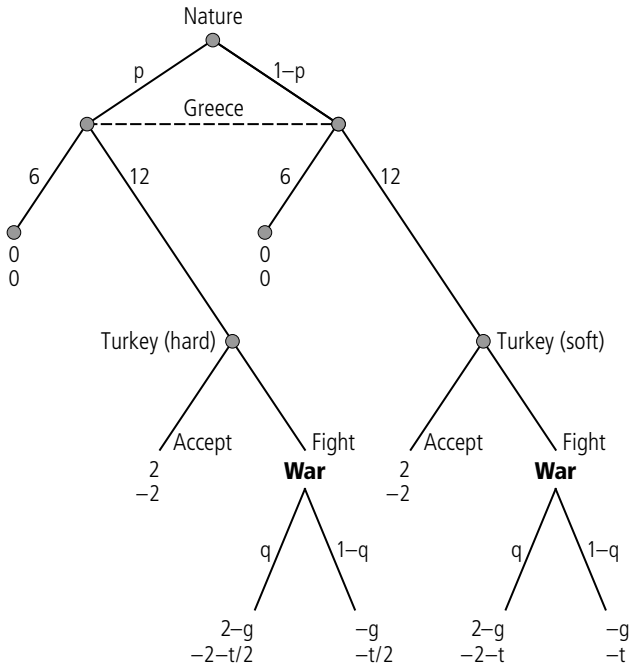
In essence, two principal variables define Greek and Turkish preferences over the possible outcomes of the dispute: Greek and Turkish values in the revised status quo and both countries' war costs. These values are defined relative to the value of the status quo normalized to zero for both Greece and Turkey, see *Figure 2*.

Wars are prospective events that include either a Greek or a Turkish victory with specified probabilities. Given that Greece prevails with  $q$  and Turkey prevails with  $1 - q$  probabilities, the Greek expected war payoff becomes:  $q(2 - g) + (1 - q)(-g) = 2q - g$ . For Turkey, the Hard type similarly obtains:  $q(-2 - t/2) + (1 - q)(-t/2) = -2q - t/2$ . The Soft gets:  $q(-2 - t) + (1 - q)(-t) = -2q - t$ . Now our game tree is complete (see *Figure 3*).

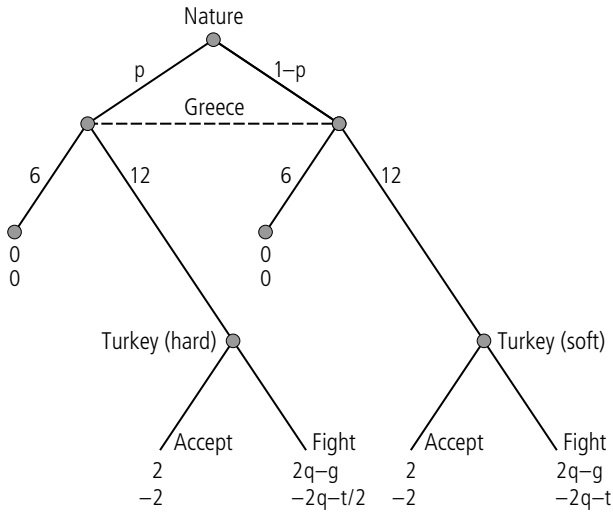
## 4 Equilibrium Analysis

The Hard fights rather than accept 12 miles if its expected war payoff strictly exceeds its value in the revised status quo. This implies:  $-2 < -2q - t/2$ ; therefore,  $1 - t/4 > q$ . Hence, if the likelihood of Greek victory in the case of war satisfies this condition, the Hard fights Greek extension of territorial waters. If it is greater than  $1 - t/4$ , the Hard accepts. If it is equal to  $1 - t/4$ , the Hard is indifferent between responding by attack and accepts 12 miles as the new norm. Similarly, the Soft fights, given that Greece extends its territorial waters if  $-2 < -2q - t$ , that is, if  $1 - t/2 > q$ . Otherwise, if  $1 - t/2 < q$ , the Soft accepts. If  $q = 1 - t/2$ , then the Soft is indifferent to fighting and accepts 12 miles as a new norm of territorial sea delimitation.

There are five different equilibria of the game. The equilibrium strategies are characterized by a triplet, where the first component denotes hard Turkey's decision,



**Fig. 2.** Greek–Turkish territorial-waters conflict game (detailed)



**Fig. 3.** Greek–Turkish territorial-waters conflict game (reduced)

the second soft Turkey's decision, and the third Greece's decision. The equilibria are classified into three cases according to the likelihood of Greek victory as compared to Turkish losses in case of war.

Case 1:  $1 - \frac{t}{2} < q < 1 - \frac{t}{4}$

Case 1.1:  $q < \frac{g}{2}$

Case 1.1.1:  $p > \frac{2}{2(1-q)+g}$

*Equilibrium 1: {Fight, Accept, Remain at six miles}*

Case 1.1.2:  $p < \frac{2}{2(1-q)+g}$

*Equilibrium 2: {Fight, Accept, Extend to 12 miles}*

Case 1.2:  $q > \frac{g}{2}$

*Equilibrium 2: {Fight, Accept, Extend to 12 miles}*

Case 2:  $q < 1 - \frac{t}{2}$

Case 2.1:  $q < \frac{g}{2}$

*Equilibrium 3: {Fight, Fight, Remain at six miles}*

Case 2.2:  $q > \frac{g}{2}$

*Equilibrium 4: {Fight, Fight, Extend to 12 miles}*

Case 3:  $q > 1 - \frac{t}{4}$

*Equilibrium 5: {Accept, Accept, Extend to 12 miles}*

Figure 4 represents equilibrium regions under different parametric conditions.

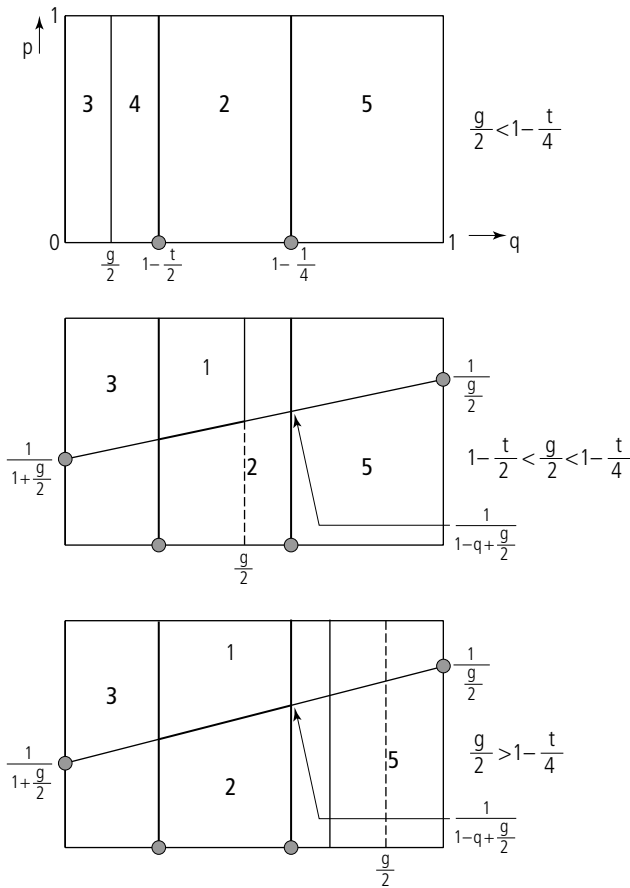
## 5 Interpretation of Results

To assess how the model improves and disciplines intuitions or established viewpoints on the Aegean issue, we need to interpret the equilibria. The first two equilibria involve distinct actions for the two types of Turkey: if Greece extends its territorial waters to 12 miles, Hard Turkey fights and Soft Turkey accepts the new status quo. Greece, on the other hand, remains at six miles or extends its territorial-waters limit if its belief of facing Hard Turkey is above or below a threshold, respectively. Greek beliefs about Turkey's type matter only in these equilibria: in the remainder, both types of Turkey take the same action, and Greek misperceptions do not matter. We find that it is not necessary to think about Greek misperceptions to explain the current status quo, a future war, or a revised status quo. A practitioner could produce the same arguments without any difficulty if he or she is interested in such modeling efforts.

There are two ways of searching for implications of the first two equilibria.<sup>4</sup> One is to assume that the Greek probability of prevailing in war  $q$  is fixed and  $g$  varies. The second is to assume that  $g$  is fixed and  $q$  varies. The threshold gets progressively smaller (bigger) when Greek war costs increase (decrease), and it gets larger (smaller) when the Greek probability of prevailing increases (decreases). Suppose

<sup>4</sup> We can also interpret the first two equilibria by fixing the threshold and varying the Greek belief of facing the Hard. However, these interpretations require extra-game concerns to justify variations in that belief.





**Fig. 4.** Graphical representation of the parameter regions determining the five equilibria for the Greek–Turkish Territorial-Waters Conflict game

that the Greek belief of facing the Hard is fixed as relatively small or big. We obtain the following implications:

1. If Greek war costs increase, it is likely that a small Greek belief of facing the Hard will exceed the threshold that gets smaller. Greece will then decide to remain at six miles.
2. If Greek probability of victory decreases, it is again likely that a small Greek belief of facing the Hard will exceed a threshold that gets smaller. Greece will again remain at a six-mile limit.
3. If Greek war costs decrease, it is likely that a small Greek belief of facing the Hard will not exceed the threshold that gets bigger. Greece will then extend its territorial waters to 12 miles.

4. If Greek probability of victory increases, it is likely that a small Greek belief of facing the Hard will not exceed the threshold that gets bigger. Greece will then extend its territorial waters to 12 miles.
5. If Greek war costs increase, it is likely that a high Greek belief of facing the Hard will exceed the threshold that gets smaller. Greece will then remain at a six-mile limit.
6. If Greek probability of victory decreases, it is likely that a high Greek belief of facing the Hard will exceed a threshold that gets smaller. Greece will then remain at a six-mile limit.
7. If Greek war costs decrease, it is likely that a high Greek belief of facing the Hard will not exceed a threshold that gets bigger. Greece will then extend its territorial waters to 12 miles.
8. If Greek probability of victory increases, it is likely that a high Greek belief of facing the Hard will not exceed a threshold that gets bigger. Greece will then extend to 12 miles.

The special feature of the remaining equilibria is that both types of Turkey take the same action. Either they both accept or fight against the Greek extension. In the third equilibrium, Greece has a relatively low likelihood of prevailing in a war and both types of Turkey fight including the Soft. The equilibrium puts two conditions upon a Greek likelihood of prevailing: not only must  $q$  be smaller than a threshold but it also has to be smaller than half of Greek war costs. Letting for example  $q = 1/3$  one obtains  $1/3 < g/2$ , and this implies that  $g > 2/3$ . Under these conditions, Greece keeps the extent of its territorial waters at six miles regardless of its belief about Turkish war costs. Hence, it is not Greek misperceptions but mainly Greek costs of war and the likelihood of prevailing that drive Greek behavior.

The Greek action changes when the likelihood of prevailing exceeds half of Greek war costs, even though it is still smaller than the threshold. Greece extends its territorial waters, given that both types of Turkey respond by fighting. This is the fourth equilibrium. There is no deterrent effect of the Turkish declaration of a *casus belli*. The failure of the deterrence stems solely from the relationship between Greek war costs and a Greek likelihood of victory. In the last equilibrium, Greece is almost certain that it will prevail in a war and extends its territorial waters. As the Greek likelihood of prevailing is high, the Turkish likelihood becomes quite small. Regardless of its belief about Turkish war costs, Greece extends and Turkey does not militarily react to Greek action. Both types of Turkey accept the new status quo. The status quo is then peacefully revised. Hence, it is possible that a new status quo emerges in the Aegean Sea without war.

The balance of military capabilities is an important indicator of the probability of prevailing in a conflict and war costs. Huth and Russett [8] take the balance of active manpower as an indicator of the balance in general. According to Smith *et al.* [9] the balance of military capability indicates the probability of prevailing in a conflict. Huth *et al.* [7] maintain that the country enjoying superiority in terms of the balance of conventional capabilities has a higher probability of victory and would also suffer lesser war costs. Turkey possesses the second largest army in the North

Atlantic Treaty Organization (NATO), surpassed only by the United States. Turkey's population and size of total armed forces constantly surpass those of Greece by a wide margin.<sup>5</sup>

As the balance of forces favors Turkey, it can be assumed that the Turkish probability of prevailing in a conflict is high and Turkish war costs are low. Accordingly, as the first and the second cases rely upon a relatively high Greek likelihood of prevailing, the third and the fourth equilibria become plausible. The balance of power in favor of Turkey also implies a high Greek perception of facing the Hard. However, even if a Greek likelihood of prevailing is small and both types of Turkey fight against the extension, Greece can still decide to accept 12 miles, as the fourth equilibrium demonstrates.

## 6 Policy Implications

How could the game model be applied to be useful for policymakers and analysts? Tanter [10] indicates that the relevance of a model (that is, its feasibility and applicability to current policy needs) is a necessary condition for use by decision makers and policy analysts. Accordingly, these individuals should judge that the game models are an important issue and that assumed preferences, information conditions, and policy options are realistic. For example, if both countries live in a particularly co-operative period, policymakers, either Greek or Turkish, may hold that the territorial waters issue is not vital. Further, policymakers could argue that both countries possess a far larger range of options than specified by the model. The challenge is first to convey an understanding and then an appreciation of the abstract feature of formal models. When this has been appreciated, policymakers can be encouraged to construct their own models that would enable them to generate alternative preferences and policy options. In this sense the model is a tool for generating competing explanations of deterrence and its failure in the Aegean issue and, where possible, for guiding official policies in desired directions.

The model could also serve organizational purposes [10]. If, for example, the ministry of foreign affairs is interested in informational asymmetries in securing the status quo, then the model may well contribute to the organization's planning. The same model could also contribute to the planning done by military and civilians in the ministry of defense. Foreign policy is often a result of deliberations among a variety of agency representatives or political leaders [2]. The appreciation of the model at a practical level would then depend upon the intricate organizational and bureaucratic conditions over which the modeler has limited control. Nevertheless, it is still possible to deal with such complications by using evolutionary frameworks [4].

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<sup>5</sup> For example, Greece and Turkey's population in 2000–2001 totaled 10.7 million and 66 million, respectively. The figures for 1969–1970 were 8.8 million and 34 million, respectively. In 1969–1970 the size of Greek and Turkish armed forces (on active duty) were, respectively, 159,000 and 483,000. In 2000–2001 they became 159,170 and 609,700, respectively. (Source: *The Military Balance*, Institute for Strategic Studies, London.)

Finally, Greek and Turkish policymakers and analysts may construct different games for the Aegean issue. The game at hand models the Turkish reaction to a possible Greek extension of territorial waters and subsequent outcomes, including maintaining the status quo, revising the status quo, and war. A Greek version might differ. Unlike the game which models the type of Turkish reaction to possible Greek moves, Greek foreign policymakers may be interested in how to react to possible Turkish moves. For example, Greek practitioners and analysts might be interested in the timing of an extension decision or in linking the issue to Turkey's potential entry into the European Union. They could try to forecast Turkish responses to these moves by constructing simple games. In general, these models would reflect both similarities and differences between Greek and Turkish perceptions of relevant problems with regard to this issue.

## 7 Conclusion

Game models discipline strategic calculations. The game, though simple, goes beyond disciplined and rigorous deductions: it demonstrates the possibility of taking such subjective elements as misperceptions into account in a formal model. Intuitively, practitioners might think that Greek beliefs about Turkish war costs are quite important in bilateral relations. Yet we found that Greek beliefs do not matter in the continuation of the status quo. Greece is deterred from extending its territorial waters as long as its war costs reduce its probability of winning a military confrontation with Turkey. If Greek war costs get smaller, then deterrence fails and war occurs. Hence, unlike Greek misperceptions, Greek war costs determine to a great extent the state of Greek–Turkish dispute over the Aegean Sea.

It is possible to extend the model by introducing two-sided misperceptions, so that Turkey may also misperceive Greek war costs. Such a model could imply different equilibria that are dependent on or independent of Greek and Turkish misperceptions. Güner and Druckman [5] offer such a game that models a bronze-age interaction. The extensions are numerous; in fact, they could add additional states into the interaction, they could modify information conditions, and options available to the decision makers. Of course, more parameters have to be estimated, and the results cannot be interpreted as easily as before. Therefore, it is reasonable that one builds a simple model initially and relaxes after making some assumptions pertaining to more complex interactions. One would possibly find that new assumptions do or do not have an impact upon equilibria. When comparing models, practitioners may satisfy their curiosity about the consequences of different presumptions. Thus, game models do not only imply disciplined thoughts but may also function as research appetizers.

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